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10/663,821	09/17/2003	Yasushi Namii	20-135	4039
7590 08/02/2005				
Arnold International P.O. BOX 129 Great Falls, VA 22066			EXAMINER LAVARIAS, ARNEL C	
			ART UNIT 2872	PAPER NUMBER

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/663,821

**Applicant(s)**

NAMII, YASUSHI

**Examiner**

Arnel C. Lavarias

**Art Unit**

2872

PM

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6 and 8-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-4, 6 and 8-18 is/are allowed.
- 6) ☒ Claim(s) 1 and 19-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy was filed on 9/17/03. Additionally, the Examiner acknowledges and accepts the submission of a translation to English of the JP2002-275280 document, submitted 5/24/05. In view of this submission, the rejections of Claims 2 and 16 in Section 7 of the Office Action dated 2/24/05 are respectfully withdrawn.

### ***Response to Amendment***

2. The amendments to the specification and abstract of the disclosure in the submission dated 5/24/05 are acknowledged and accepted. In view of these amendments, the objections to the specification in Sections 4-5 of the Office Action dated 2/24/05 are respectfully withdrawn.
3. The amendments to Claims 1, 6, 8, and 11 in the submission dated 5/24/05 are acknowledged and accepted.
4. The addition of Claims 19-22 in the submission dated 5/24/05 is acknowledged and accepted.
5. The cancellation of Claims 5 and 7 in the submission dated 5/24/05 is acknowledged and accepted.

***Response to Arguments***

6. The Applicant's arguments filed 5/24/05 have been fully considered but they are not persuasive.
7. The Applicant argues that, with respect to newly amended Claim 1, the combined teachings of Hagner et al. and Lücke et al. fails to teach or reasonably suggest the illumination optical system irradiating a light flux from the light source section onto an observation object without passing illumination light through the objective lens, and a center position of the light source section being de-centered from the optical axis of the projection optical system. The Examiner respectfully disagrees. It is noted that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In the instant case, Hagner et al. discloses the center position of the light source section (See for example 10 in Figure 2 of Hagner et al.) being de-centered from the optical axis of the projection optical system (See for example 18 which passes through element 24 and 11 in Figure 2 of Hagner et al.). Further, Lücke et al. discloses the illumination optical system irradiating a light flux from the light source section onto an observation object without passing illumination light through the objective lens (See objective 13 and deflection element 11 of Figure 2 of Lücke et al., the deflection element routing the incident light to the sample without passing the incident light through the objective lens). The Applicant also failed to provide any arguments or evidentiary support with regard to the combined teachings provided by both Hagner et al. and Lücke et al.

Art Unit: 2872

8. Claims 1, 19-22 are now rejected as follows.

***Claim Objections***

9. Claims 19-22 are objected to because of the following informalities:

Claim 19 recites the limitation "the distance" in line 15. There is insufficient antecedent basis for this limitation in the claim. Claims 20-22 are dependent on Claim 19, and hence inherit the deficiencies of Claim 19.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 19-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 19 recites the limitation that 'the distance between the illumination light flux and the optical axis of the observation optical system is smaller when the light source section is de-centered from the optical axis of the illumination optical system than when the light source section is aligned on the optical axis of the illumination optical system'.

However, the specification of the disclosure fails to provide adequate support for this limitation. In particular, it is noted that the specification, on Pages 6-8, describes the de-centering of the end of the light guide (See for example 16 in Figure 1(a) of Applicant's disclosure) in the light source member, the de-centering being transverse to the optical axis defined by the illumination optical system (See for example 8, 10 in Figure 1(a) of Applicant's disclosure). In particular, the specification discusses that de-centering the light guide with respect to the illumination optical system allows the illuminating light flux on the observation object to be more nearly aligned (See Page 8, lines 11-17).

However, the specification of the disclosure does not explicitly disclose a change in distance occurring between the illumination light flux and the optical axis of the observation system with a change in de-centering of the light guide.

### ***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hagner et al. (U.S. Patent No. 4353618), of record, in view of Lücke et al. (U.S. Patent No. 5748367), of record.

Hagner et al. discloses a microscope (See for example Figures 1-2), comprising a light source section (See 10 in Figure 2); an observation optical system that includes an

objective lens (See for example 14, 25 in Figure 2); an illumination optical system (See for example 11, 12, 18, 24 in Figure 2) having an optical axis and including a projection optical system (See for example 11, 24 in Figure 2) that forms a single image within the illumination optical system, the illumination optical system irradiating a light flux from the light source section onto an observation object (See for example 15 in Figure 2); wherein a center position of the light source section is de-centered from the optical axis of the projection optical system (See 10 in Figure 2). Hagner et al. lacks the microscope being stereoscopic and including left and right zooming optical systems for changing the magnification of the observation optical system and left and right eyepiece optical systems, and the illumination optical system irradiating a light flux from the light source section onto an observation object without passing illumination light through the objective lens. However, the use of such optical elements is well known and conventional in microscope devices, including stereoscopic and non-stereoscopic microscope devices. For example, Lücke et al. teaches a conventional stereoscopic microscope (See for example Figure 2) for viewing an object during a surgical procedure, wherein the stereomicroscope includes left and right zooming optical systems (See for example 14 in Figure 2) for changing the magnification of an image projected by the objective lens (See for example 13 in Figure 2); and left and right eyepiece optical systems (See for example 12 in Figure 2). Typical eyepiece optics for both the left and right eye are not specifically shown, but are well known for projecting the images from the objective lens to the eyes. In addition, Lücke et al. teaches that the illumination optical system may irradiate a light flux from the light source section onto an observation

Art Unit: 2872

object without passing illumination light through the objective lens (See objective 13 and deflection element 11 of Figure 2 of Lücke et al., the deflection element routing the incident light to the sample without passing the incident light through the objective lens). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the microscope of Hagner et al., include left and right zooming optical systems for changing the magnification of the observation optical system and left and right eyepiece optical systems, and the illumination optical system irradiating a light flux from the light source section onto an observation object without passing illumination light through the objective lens, as taught by Lücke et al., for the purpose of 1) providing stereo viewing to the observer, thus imparting depth due to parallax to the images seen by the observer, while allowing the observer to adjust the size of the image, and 2) maximizing illumination light throughput while allowing illumination of the sample at various incidence angles.

14. Claims 19-20, 22, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (U.S. Patent No. 5971577) in view of Lücke et al.

Mori et al. discloses a microscope (See for example Figures 1-6), comprising a light source section (See 3 in Figure 3); an illumination optical system (See for example 3, 14, 5, 6, 7, 8 in Figure 3) having an optical axis (For example the optical axis of element 14 or elements 5, 6, 7 in Figure 3) and including a projection optical system (See 5, 6, 7 in Figure 3) that forms a single image within the projection optical and which irradiates a light flux from the light source section onto an observation object (See for example 10 in Figure 3) via the projection optical system; an observation optical system that includes an

objective lens (See for example 9 in Figure 3); wherein a center position of the light source section is de-centered from the optical axis of the illumination optical system (See for example 23, 32 in Figures 4-5) such that a distance between the illumination light flux and the optical axis of the observation optical system is smaller when the light source section is de-centered from the optical axis of the illumination optical system than when the light source section is aligned on the optical axis of the illumination optical system (It is noted that for a constant focusing power of the reflector 2 of the light source 3, as the angle  $\theta$  increases, the de-centering of, for example, the center point at which the light source 3 is located at will move closer toward the optical axis defined by the observation optical system, i.e. the optical axis defined by 9, 11 in Figure 3.). Mori et al. additionally discloses the illumination optical system including a reflecting member (See 8 in Figure 3) for leading the light flux from the light source section to the object; the reflecting member being positioned in the vicinity of an image of the light source section (See 8 in Figure 3); and the de-centering amount of the center of the light source relative to the illumination optical system being changeable (See Figures 1-2). Mori et al. lacks the microscope being stereoscopic and including left and right zooming optical systems for changing the magnification of the observation optical system and left and right eyepiece optical systems. However, the use of such optical elements is well known and conventional in microscope devices, including stereoscopic and non-stereoscopic microscope devices. For example, Lücke et al. teaches a conventional stereoscopic microscope (See for example Figure 2) for viewing an object during a surgical procedure, wherein the stereomicroscope includes left and right zooming optical systems (See for

example 14 in Figure 2) for changing the magnification of an image projected by the objective lens (See for example 13 in Figure 2), and left and right eyepiece optical systems (See for example 12 in Figure 2). Typical eyepiece optics for both the left and right eye are not specifically shown, but are well known for projecting the images from the objective lens to the eyes. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the microscope of Mori et al., include left and right zooming optical systems for changing the magnification of the observation optical system and left and right eyepiece optical systems, as taught by Lücke et al., for the purpose of providing stereo viewing to the observer, thus imparting depth due to parallax to the images seen by the observer, while allowing the observer to adjust the size of the image.

15. Claim 21, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. in view of Lücke et al. as applied to Claim 19 above, and further in view of Tomioka (JP 09-274141A), of record.

Mori et al. in view of Lücke et al. discloses the invention as set forth above in Claim 19, except for the illumination optical system including a variable magnification optical system for changing the range of the illumination field in conjunction with a change in magnification of the observation optical system. However, Tomioka teaches alternative embodiments of a stereoscopic microscope device (See for example Figures 1, 3-4) for viewing images during surgical procedures, wherein a magnification optical system (See for example 20a in Figure 1; 20 in Figure 3) of the illumination optical system (See 25, 24, 22, 29, 20a in Figure 1; 25, 24, 20, 30 in Figure 3) of the microscope may be

integrated with at least one of the zoom optical systems (See for example 12a,b in Figures 1, 3) of the observation optical systems (See 12a,b, 11 in Figures 1, 3) of the microscope, such that the zoom functions operate simultaneously for both the illumination optical system and the observation optical system of the stereoscopic microscope (See 54a,b in Figure 4). Changes in the illumination field size automatically lead to changes in observation field size since the combined zoom optical system functions on both the observation and illumination optical systems. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the illumination optical system of the microscope of Mori et al. in view of Lücke et al. include a variable magnification optical system for changing the range of the illumination field in conjunction with a change in magnification of the observation optical system, as taught by Tomioka, for the purpose of reducing the size, cost and complexity of the microscope system, while allowing for linked, controlled operation of the luminance of the illumination optical system with the magnification function of the zoom system in the observation optical system.

***Allowable Subject Matter***

16. Claims 2-4, 6, 8-18 are allowed.

17. The following is a statement of reasons for the indication of allowable subject matter:

Claim 2 is allowable over the cited art of record for at least the reason that the cited art of record fails to teach or reasonably suggest a stereoscopic microscope, as generally set forth in Claim 2, the microscope including, in combination, an illumination optical

system that includes a reflecting member for leading the light flux from the light source section to an object, the reflecting member being inserted into and removed from a space on the object side of the objective optical system in conjunction with a zooming operation of the left and right zooming optical systems. Claims 3-4, 9-10, 16-18 are dependent on Claim 2, and hence are allowable for at least the same reasons Claim 2 is allowable.

Claim 6 is allowable over the cited art of record for at least the reason that the cited art of record fails to teach or reasonably suggest a stereoscopic microscope, as generally set forth in Claim 6, the microscope including, in combination, a center position of the light source section being de-centered from the optical axis of the illumination optical system; and the reflecting member being de-centered from the optical axis of the illumination optical system in a direction that is opposite to the direction that the center of the light source section is de-centered from the illumination optical system.

Claim 8 is allowable over the cited art of record for at least the reason that the cited art of record fails to teach or reasonably suggest a stereoscopic microscope, as generally set forth in Claim 8, the microscope including, in combination, a center position of the light source section being de-centered from the optical axis of the illumination optical system; an optical member with non-circular output end being arranged near an image formation surface of the illumination optical system; and the shape of the output end of the light guide being substantially similar to the non-circular shape of the output end of the optical member.

Claim 11 is allowable over the cited art of record for at least the reason that the cited art of record fails to teach or reasonably suggest a stereoscopic microscope, as generally

set forth in Claim 11, the microscope including, in combination, a center position of the light source section being de-centered from the optical axis of the illumination optical system; and the illumination optical system has a reflecting member that leads the light flux from the light source section to an object, the reflecting member being inserted into and removed from a space on the object side of the objective lens in conjunction with a zooming operation of the observation optical system. Claims 12-15 are dependent on Claim 11, and hence are allowable for at least the same reasons Claim 11 is allowable.

### *Conclusion*

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

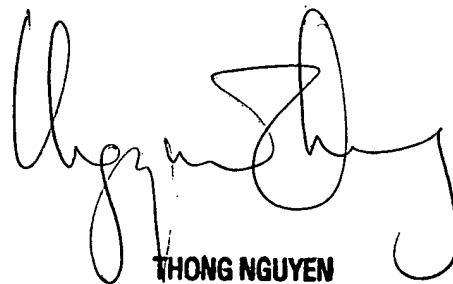
Art Unit: 2872

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 9:30 AM - 6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Arnel C. Lavarias  
7/26/05



**THONG NGUYEN  
PRIMARY EXAMINER  
GROUP 2800**